

### DETAILED ACTION

Applicant's response filed on July 21, 2008 to the Notice of Allowance dated May 09, 2008 is acknowledged. Applicants have amended claims 1, 9 and 15. Claims 1, 3-10, 12-17 are pending and are present for examination.

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Claim 1 (Presently amended) A composition comprising an orthogonal aminoacyl-tRNA synthetase (O-RS), wherein the O-RS preferentially aminoacylates an O-tRNA with p-acetyl-L-phenylalanine; and, wherein the O-RS comprises an the amino acid sequence of SEQ ID NO: 18 or a conservative variation thereof comprising at least 90% sequence identity with SEQ ID NO: 18; and, wherein the ORS further comprises an Ala or Leu at position corresponding to position 32, or comprises Gly at a position corresponding to position 158 compared to wild type tyrosyl tRNA synthetase from ~~Methylococcus~~ Methanococcus jannaschii.

Cancel claim 2.

Claim 9 (Presently amended) A cell comprising a translation system, wherein the translation system comprises:

- an orthogonal tRNA (O-tRNA);
- an orthogonal aminoacyl-tRNA synthetase (O-RS); and,
- p-acetyl-L-phenylalanine;

wherein the O-RS preferentially aminoacylates an O-tRNA with p-acetyl-L-phenylalanine;  
wherein the O-RS comprises the amino acid sequence of SEQ ID NO: 18 or a conservative variation thereof comprising at least 90% sequence identity with SEQ ID NO: 18; and, comprising Ala or Leu at position corresponding to position 32, or comprising Gly at a position corresponding to position 158 compared to wild type tyrosyl tRNA synthetase from ~~Methylococcus~~ Methanococcus jannaschii.

Claim 15 (Presently amended) An E. coli cell comprising:

- an orthogonal tRNA (O-tRNA);
- an orthogonal aminoacyl-tRNA synthetase (O-RS);

wherein the O-RS preferentially aminoacylates the O-tRNA with p-acetyl-L-phenylalanine;  
wherein the O-RS comprises the amino acid sequence of SEQ ID NO: 18 or a conservative variation thereof comprising at least 90% sequence identity with SEQ ID NO: 18; and, comprising Ala or Leu at position corresponding to position 32, or comprising Gly at a position corresponding to position 158 compared to wild type tyrosyl tRNA synthetase from ~~Methylococcus~~ Methanococcus jannaschii;

- p-acetyl-L-phenylalanine; and,

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a nucleic acid that comprises a polynucleotide that encodes a polypeptide of interest, wherein the polynucleotide comprises at least one selector codon that is recognized by the O-tRNA,

**Conclusion:**

Following the amendments claims 1, 3-10, 12-17 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAGNEW H. GEBREYESUS whose telephone number is (571)272-2937. The examiner can normally be reached on 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr Bragdon can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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4/23/08

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